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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
|-----------------|-------------|----------------------|---------------------|------------------|
| 09/941,628 | 08/30/2001 | In Jae Chung | 041501-5443 | 6711 |

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EXAMINER

TON, MINH TOAN T

ART UNIT PAPER NUMBER

2871

DATE MAILED: 01/14/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

| | | | | |
|------------------------------|------------------------|--|---------------------|--|
| Office Action Summary | Application No. | | Applicant(s) | |
| | 09/941,628 | | CHUNG ET AL. | |
| | Examiner | | Art Unit | |
| | Toan Ton | | 2871 | |

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 12-18-03.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1,2,5-8 and 23 is/are pending in the application.
- 4a) Of the above claim(s) 9-21 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1,2,5-8 and 23 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
 Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. §§ 119 and 120

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 a) ☐ All b) ☐ Some * c) ☐ None of:
 1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
 * See the attached detailed Office action for a list of the certified copies not received.
- 13) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application) since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.
 a) ☐ The translation of the foreign language provisional application has been received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121 since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) Paper No(s). _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____ | 6) <input type="checkbox"/> Other: _____ |

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 1-2, 5-8, 23 are rejected under 35 U.S.C. 103(a) as being unpatentable over Sawatsubashi et al (US5147301, Sawa hereinafter) in view of Wakai et al (US 5166085).

Sawa discloses and shows a liquid crystal display device comprising (see Figures 3-4): a first substrate 102 having a common electrode formed thereon; a second substrates 101 having an electrode pattern formed thereon; a liquid crystal layer (109) sandwiched between the paired substrates; a seal pattern 108 formed peripherally to a displaying area, and contacting the first and second substrates and completely surrounding the electrode pattern, i.e., the electrode pattern completely embedded with the seal pattern.

Sawa discloses the substrate comprising basic components of a thin film transistor (TFT) such as gate, drain, source (see Figures 3-4).

Sawa shows the electrode pattern contacting (/embedded within) the seal pattern (Figures 3-4).

The limitation not disclosed by Sawa is a pixel electrode formed on the protective film. Sawa discloses the pixel electrode 103 directly connected to the drain electrode 104. Wakai discloses and shows (Figures 1-2) that an active matrix substrate comprising a thin film transistor having a pixel electrode directly connected to the drain electrode suffers several disadvantages

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such as short-circuiting, thus, it is hard to obtain a TFT which can stably operate without causing a short-circuiting between the pixel electrode and the drain electrode (see col. 2, lines 18-27, lines 63-68). Wakai solves the short-circuiting problem by forming the insulation layer between the pixel electrode and the drain electrode, wherein the pixel electrode is electrically connected to the drain electrode through a contact hole of the insulation layer. Therefore, it would have been obvious to one of ordinary skill in the art to employ an insulating layer (Applicant's protective film) having a contact hole and formed between the pixel electrode and the drain electrode for avoiding several disadvantages such as short-circuiting.

Per claim 7, an operational LCD device comprises a mode in which an E-field is applied between the upper(common) electrode and the lower(pixel) electrode.

Per claim 8, TFT(s) serves a switching means to the pixel electrode.

It would have been at least obvious to one of ordinary skill in the art to form the electrodes on the substrate and the electrodes of the same material (also at the same time) for advantages such as cost-reduction, processing steps-reduction.

Response to Arguments

3. Applicant's arguments filed 06-13-03 have been fully considered but they are not persuasive.

Applicant's arguments are as follows:

(1) Sawa fails to disclose the electrode pattern completely embedded with the seal pattern.

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2) Sawa fails to disclose an E-field applied between the upper(common) electrode and the lower(pixel) electrode.

(3) Sawa fails an electrode pattern applied with a constant DC bias voltage.

Examiner's responses Applicant's arguments are as follows:

(1) Sawa discloses a seal pattern 108 completely surrounding the electrode pattern 103, i.e., the electrode pattern 103 completely embedded with the seal pattern 108.

(2) An operational LCD device comprises a mode in which an E-field is applied between the upper(common) electrode and the lower(pixel) electrode.

(3) TFT(s) serves a switching means to the pixel electrode.

Conclusion

4. This is a RCE of applicant's earlier Application No. 09/941628. All claims are drawn to the same invention claimed in the earlier application and could have been finally rejected on the grounds and art of record in the next Office action if they had been entered in the earlier application. Accordingly, **THIS ACTION IS MADE FINAL** even though it is a first action in this case. See MPEP § 706.07(b). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37

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CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no, however, event will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Contact Information

5. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Toan Ton whose telephone number is (703) 305-3489. Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308 0956.

January 7, 2004

TOANTON
PRIMARY EXAMINER